THE LIMITATIONS OF TREND ANALYSIS: Why Trend Analysis Should not be the Exclusive and Deciding Factor for Categorizing Revenue

Key Takeaways

- The Executive Appropriations Committee's (EAC) trend analysis was conducted outside the consensus revenue process and, consequently, was not vetted by the multitude of economists involved in the traditional revenue process.
- Trend analysis is limited and cannot, by itself, tell the full story of Utah's economic outlook. Instead, revenue trend analysis should be considered as one tool of many available.
- The analysis used to determine if revenues of $116 million are ongoing or one-time includes results and assumptions that merit additional review and vetting.
- Utah's economy is experiencing healthy, sustainable growth. The outlook for Utah's economic future is bright. Reserves above pre-recession levels are available for future economic storms.
- The legislative intent to ensure that Utah can weather future economic downturns is a good one. Finding the right way to address this objective is a point that merits continued discussion as the decision will have major implications for funding ongoing increases in education.

Issues Related to Process

- Governor Herbert's FY 2016 budget recommendations are based on adopted consensus estimates of ongoing and one-time revenue.

- The consensus process has historically been a collaborative effort where decisions are made regarding the designation of ongoing versus one-time revenue. Participants bring different models and perspectives to the discussions in order to gain a more comprehensive picture of Utah's future economic reality and to vet assumptions. Decisions made outside this process undermine the validity of the process itself.

- Consensus does and should focus on what revenue is sustainable and ongoing—taking into consideration economic indicators, demographic changes, policy changes, national trends, and other data points. There is not one single data point that can depict the ongoing nature of revenue.

- Based on a subjective trend analysis using historical data, the Executive Appropriations Committee (EAC) recently approved a motion to sweep $116 million of the $325 million ongoing consensus revenue estimate. The basis for this action was the assumption that this portion of consensus ongoing revenue was not truly ongoing and constituted some sort of above-trend revenue "bubble." The EAC decision to count ongoing funds as a revenue "bubble" was made outside the consensus process. This reduction in ongoing revenue creates significant opportunity costs and limits Utah's ability to invest in key areas, like education, that will support Utah's ongoing future prosperity. Changing revenue from ongoing to one-time fundamentally changes what the revenue will be spent on and significantly limits the legislature's budgetary options, in particular for education.

- While trend analysis can be a helpful data point in the projection of revenue, the analysis by itself is limited and cannot adequately reflect the entire economic picture. How trend analysis is applied is also highly subjective. Selecting the specific type of trend model to use is somewhat biased and can deliver widely divergent results depending on the subjective methods and assumptions used in the model. In addition, a historical trend estimate likely cannot adequately

capture recent or projected structural changes in the economy that impact future trends and, by itself, cannot entirely forecast the probability or likelihood that the historical trend will continue into future revenue collections.

- With such significant implications, any kind of trend analysis that alters revenue estimates should be discussed within the context of consensus revenue discussions. This approach would ensure that assumptions, context, trend accuracy, and other data points are fully vetted by numerous revenue analysis experts.

Issues Related to Substance

- Substantive questions about the reliability of the analysis behind sweeping $116 million of ongoing consensus revenue highlight that the action merits reconsideration. For example, the consensus revenue estimate for the portion of sales tax deposited to the General Fund in FY 2015 is $1.724 billion. For FY 2016, the EAC-adopted analysis indicates that any General Fund sales tax revenue above $1.723 billion is "above trend." In other words, **all** FY 2016 General Fund sales tax growth is considered "above trend" in the EAC analysis. It seems questionable that all General Fund sales tax growth constitutes an above-trend revenue bubble.

- For the sake of argument, accepting that the revenue "trend" amount in FY 2015 of $1.713 billion is accurate, any growth rate above 0.6% between FY 2015 and FY 2016 in the portion of sales tax deposited to the General Fund would be considered "above trend" (and therefore not ongoing under EAC's motion). It appears questionable that all sales tax above a 0.6% growth rate in sales tax would truly constitute a revenue bubble. As shown in Chart 1, the consensus estimates for FY 2016 assume a healthy 5.1% growth rate in total sales tax, far below the very high 10% to 14% growth rates experienced during the housing-boom era prior to the Great Recession and the sustained 7% to 10% growth rates experienced in the 1990s.

- As another example of highly questionable model results being used to drive state budget policy, the consensus revenue estimate for FY 2016 investment income is about $5.6 million. The analysis forming the basis of EAC's current budget policy declares that the state should only consider $146,000 of the $5.6 million ongoing. As shown in Chart 2, the state's investment income has not been remotely near $146,000 in the modern era. Given that this figure is not even within the correct order of magnitude, it seems clear that the model utilized is not appropriately predicting state revenue trends. The example clearly illustrates the limitations of mechanistically accepting whatever number a trend model produces and the prudence of not relying exclusively on trend model analysis to set budget policy for the state. Rather, trend analysis should be one tool tempered with other budgeting tools and methods as part of the consensus process.

- It is important to recognize that historical tax collection data inter-mingles economic changes with legislative policy decisions that impact revenue. The implicit assumption behind the trend revenue analysis seems to be that the tool provides insights on economic trends. In reality, analysis of revenue collection trends measures a mixture of economic and policy trends. Given the nearly $1 billion of legislative policy decisions made over the past decade (about $550 million in earmarks removed from the General Fund and roughly $400 million in tax changes) this is not a trivial issue surrounding the execution of a meaningful analysis. A trend line that includes the impact of policy decisions that alter revenues assumes not only that previous policy decisions will continue in the future, but that additional policy decisions of a similar magnitude will once again be enacted. The economic sustainability of revenue trends should be examined by looking not only at historical tax collections, which inter-mingle policy and economic changes,

but at actual economic indicators—the exact process followed in the consensus revenue process.

Summary

- Utah is currently experiencing healthy, sustainable economic growth. As we look to the future, we should not be fearful about relying on current economic growth. Rather, we should be confident that previous decisions have taken us to the point where we can focus on making investments in Utah's bright and prosperous future. As we return to more "normal" economic conditions, the current economic upturn, in many ways, is making up for the lost economic activity experienced during the economic downturn.

- As we look to the future, there will undoubtedly be economic storms to weather. However, due to prudent budget management through and since the recession, Utah has successfully built budget reserves to higher than pre-recession levels (formal budget reserves approach half a billion dollars). In addition, Utah has traditionally used many other budget tools, including informal budget reserves during recessions, which should continue to be used to weather future economic storms. Examining historical revenue trends is one tool among many for managing the state budget. Another tool that should be further considered is forward-looking budget stress testing. However, when considering and implementing new budget management tools, care should be taken to ensure that successful and flexible historic practices do not give way to mechanistic, formula-driven practices that could unintentionally undermine Utah's nationally recognized and proven budget management practices. An analysis focusing on a relatively short time period will be disproportionately impacted by the worst economic downturn since the Great Depression 70 years earlier. Revenue data analysis such as trend estimates and budget stress-testing should examine the probability of different types of recession scenarios."

- Governor Herbert, just like the legislature, wants to ensure that Utah has the ability to weather future economic downturns while at the same time investing in areas that will shore up our long-term economic vitality. The Governor is committed to working with the legislature through the consensus process to find the right balance—a process that presupposed the legislature would adhere to the historic consensus process and not make unilateral revenue decisions outside the process. As Utah's revenue collections return toward normal economic trends, there should be no cause for alarm.

- Additional detail on revenue trends can be found at http://gomb.utah.gov/wp-content/uploads/sites/7/2014/12/Trend-Revenue-FINAL.pdf.

Chart 1: EAC-Adopted Sales Tax Trend Estimates

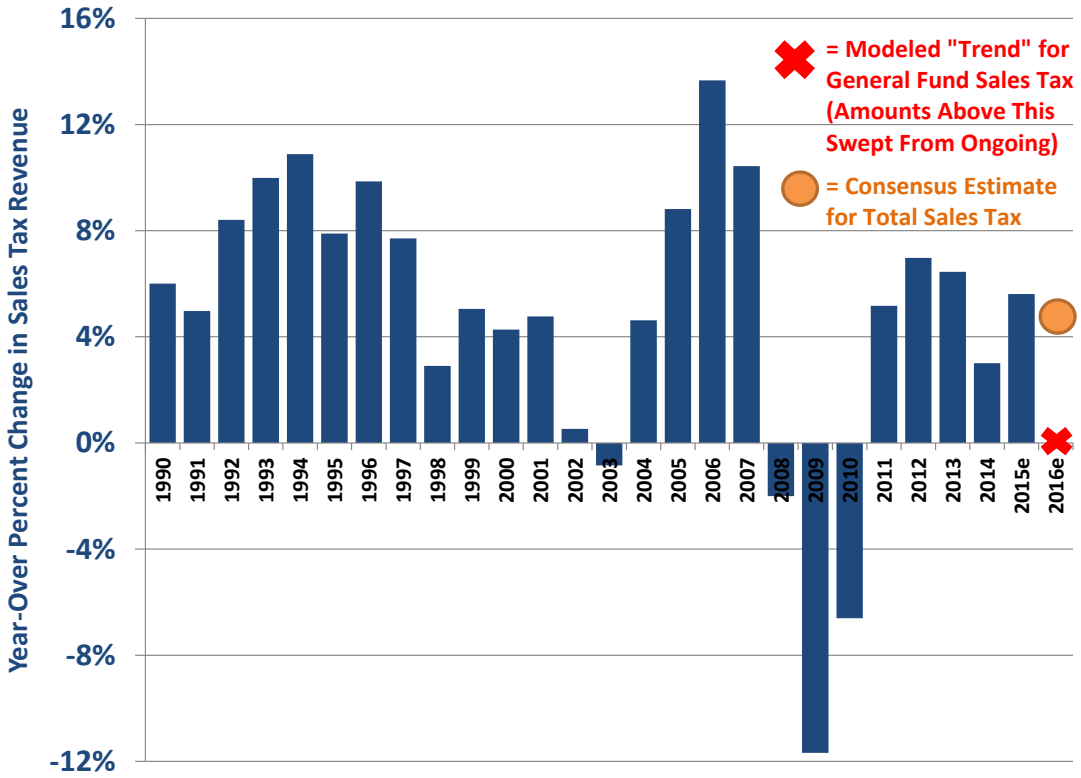
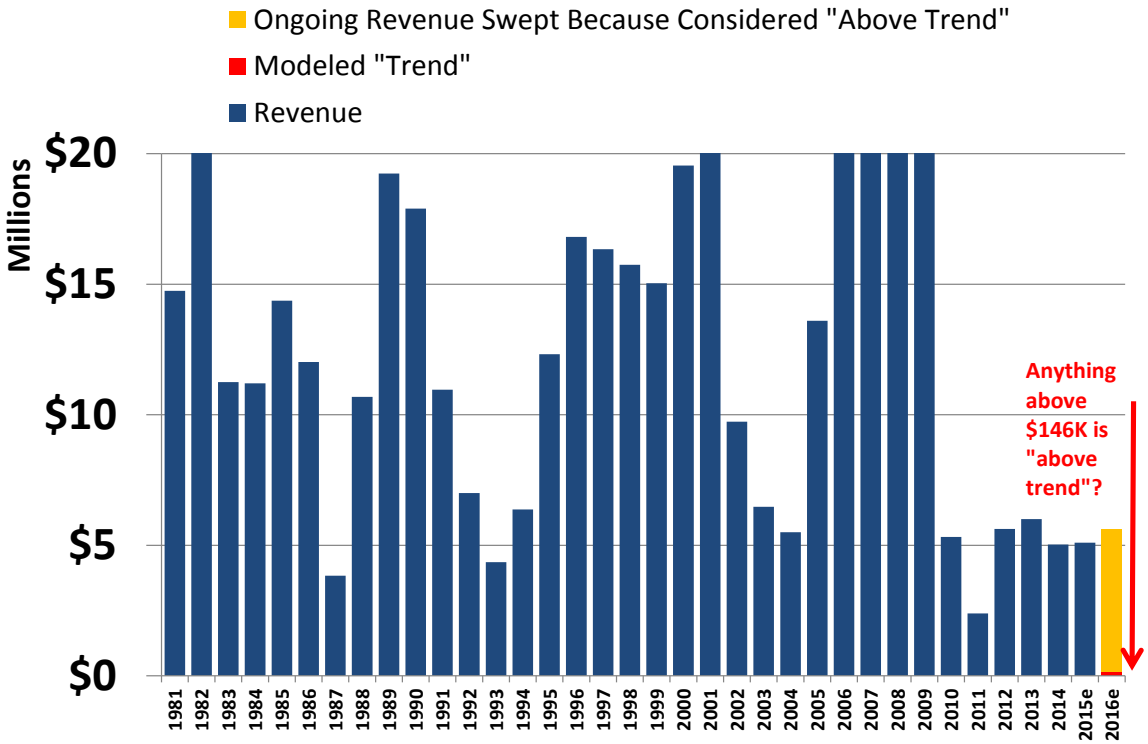


Chart 2: EAC-Adopted Investment Income Trend Estimates



Note: In an attempt to visually show the amount estimated as being "at trend" in FY 2016 ($146,000) that is of a different order of magnitude than historical data going back for many decades, chart scaling cuts off at $20 million. Investment income exceeded $20 million in FY1982 ($21M), 2001 ($28M), 2006-09 ($40M, $84M, $63M, $25M).